

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF DELAWARE**

**IN THE MATTER OF INTEGRATED RESOURCE)
PLANNING FOR THE PROVISION OF STANDARD)
OFFER SERVICE BY DP&L POWER &)
LIGHT COMPANY UNDER 26 *DEL. C.* §1007(c) &)
(d): REVIEW AND APPROVAL OF THE REQUEST) PSC DOCKET NO. 06-241
FOR PROPOSALS FOR THE CONSTRUCTION OF)
NEW GENERATION RESOURCES UNDER)
26 *DEL. C.* §1007(d) (Opened July 25, 2006))**

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**Comments by
Harris B. McDowell, III
Chair, Energy and Transit Committee
Delaware State Senate
PSC DOCKET NO. 06-241**

I thank the Commission for allowing me time to offer comments on PSC Docket No. 06-241. I have worked for the last 30 years to promote energy policies that are in the best immediate and long-term interests of Delawareans, and I believe the issues before the Commission today are of utmost importance for Delaware's energy future. I respectfully submit the following comments.

When the Legislature approved House Bill 6 (HB6) in April, 2006, we were responding to both the need to protect ratepayers from a rapid increase in electricity rates, and to ensure, through long-term Integrated Resource Planning, that Delmarva Power & Light's (DP&L's) future electricity procurements would provide Delaware ratepayers with electricity from the cleanest, cheapest, and most reliable energy sources available. In response to the requirements of HB6, DP&L submitted an Integrated Resource Plan (IRP), recently updated on December 1, 2006, that forecasts electricity supply needs for the next ten years.

To meet forecasted demand for Delaware's standard offer service customers (SOS) – mostly residential and small business customers – and to comply with Delaware's Renewable Portfolio Standard, DP&L's IRP reports the need for 125MW of new capacity from renewable resources by 2016, and 200MW of capacity which it believes can be met from demand-side management (DSM) and energy efficiency programs aimed at load reductions.¹

By PSC ruling in this docket, DP&L is required to issue an RFP for single bids to supply 400MW of new capacity secured by a 10-year minimum power purchase agreement.²

I am deeply concerned that the requirements of the RFP, as ordered by the Commission, conflict with HB6, which explicitly states:

As part of its IRP process, DP&L shall not rely exclusively on any particular resource or purchase procurement process.³

Issuance of an RFP for 400 MW of new physical generation to be acquired by DP&L is premature when there is no evidence to date that a long-term contract for new physical generation of any amount is necessary.

I would like to present three principal reasons why it is neither necessary, nor in the best interests of Delaware ratepayers, nor in accord with the intent of HB6, for DP&L to procure, via long-term contract, 400MW of new physical generation:

¹ DP&L IRP (hereinafter "IRP"), submitted December 1, 2006: p. 32.

² DP&L RFP (hereinafter "RFP"), submitted November 1, 2006: p. 2.

³ HB 6, Amendment to Section 1007, 26, (c)(1), 1.

(1) PJM's proposed transmission upgrade, the Mid Atlantic Power Pathway Project, will provide Delaware ratepayers with access to significant new, competitively priced supply, and will allow DP&L to cost-effectively meet forecasted demand via the competitive wholesale auction procedures currently in place;

(2) Competitive supply and DSM options (please see item (3) below) exist which obviate the need for procurement of 400MW of new physical generation via long-term contract. If DP&L is obligated to accept a long-term contract for 400MW of new physical generation, when preferable alternatives exist, Delaware ratepayers will be saddled with the unnecessary risk of paying stranded costs for redundant or underutilized plant that may be uncompetitive; and

(3) The State of Delaware has substantial cost effective potential for energy efficiency savings, as demonstrated in the State Climate Change Action Plan, the Governor's Energy Task Force Report, and the Briefing Report prepared for the Sustainable Energy Utility Task Force, which I co-chair.⁴

1. Transmission Upgrades Will Lead to Significant Supply Competition

As I have long argued, addressing the critical problem of transmission constraints on the Delmarva Peninsula would open Delaware's electricity markets to significant, new supply competition. Indeed, DP&L's IRP filing states that PJM's new Mid Atlantic Power Pathway Project "will mitigate congestion for the Delmarva Peninsula"⁵ and will "create opportunities for low-cost generation resources to the south and west, to be imported into Delmarva with little constraint."⁶ PJM's new transmission corridor will provide Delawareans with access to several cost-competitive supply options to meet present and future demand, thus allowing competition into the Delaware supply market and eliminating the need for, and resulting risk of, 'captive' new generation acquired at ratepayers' expense.

2. Long-term PPAs in Competitive Markets Create Stranded Costs

As I have also argued, and I state again in more detail below, if the Commission requires DP&L to engage in long-term power purchase agreements in a competitive supply environment, the Commission will subject Delaware ratepayers to the needless risk of paying nonbypassable stranded costs. If DP&L is required to enter into a long-term power purchase agreement (or PPA) via the IRP process, Delaware ratepayers could be saddled with stranded costs in at least five ways: (1) if market prices fall or if they rise more slowly than forecast; (2) if the actual use of

⁴ Dr. John Byrne, director of the University of Delaware's Center for Energy and Environmental Policy, co-chairs the SEU Task Force with me and we are joined by 5 Members of the Legislature, the Public Advocate, the State Energy Coordinator, and members of the public. For each report cited above, see respectively: http://ceep.udel.edu/publications/energy/reports/energy_delaware_climate_change_action_plan/deccap.htm ; <http://www.state.de.us/planning/livedel/etfminutes/etfinal.pdf> ; and http://www.seu-de.org/docs/SEU_Full_Report.pdf

⁵ IRP, p. 5

⁶ IRP, p. 19.

power plants contracted via PPAs is lower than expected; (3) if new federal environmental regulations change the economics of generation; (4) if new competitive service providers are more attractive to ratepayers than DP&L's standard offer services under a long-term PPA; and/or (5) if new competitive demand-side services help ratepayers save money by improving energy efficiency and encouraging customer-sited renewable energy generation, thereby making 'captive' generation redundant and inefficient.

HB6 amendments to Section 1007, Title 26 (b) give DP&L the ability to "enter into short- and long-term contracts for the procurement of power necessary to serve its customers." Under Commission order, DP&L's RFP states that "bidders may offer terms for the PPA for a minimum of 10 years and a maximum of 25 years."⁷ Nowhere in HB6 is there a requirement for DP&L to engage in power purchase agreements of any specified length, much less a *minimum* of 10 years. Certainly, DP&L should not enter into such long-term contracts if they do not meet the Legislature's intent to "stabilize the long-term outlook for Standard Offer Supply."⁸ Long-term contracts surely stabilize prices, but the resulting prices may exceed market prices during the 10-year minimum (or longer, if the Commission approves an even lengthier contract), leaving Delaware ratepayers to foot these higher bills as stranded costs. This was certainly not my intent when I co-sponsored HB6.

The competitive 3-year contract auctions currently in place will allow DP&L to satisfy its obligation to procure cost-competitive supply, especially considering that PJM's new Mid Atlantic Power Pathway Project will sizably increase competitive supply options available to meet forecasted demand. Competitive 3-year contract auctions could also allow ample flexibility for DP&L to account for load reductions that may result from successfully administered, and independently verified, state-wide energy efficiency and customer-sited renewable energy generation programs.

3. Energy Efficiency – The Cheapest and Cleanest Supply Option

For 30 years, I have noted that Delaware cannot generate a cheaper or cleaner unit of energy than a unit of saved energy. Energy efficiency and DSM furnish energy services that are competitive with, and often superior to, new physical generation. Energy efficiency produces energy savings for less cost than new generation. Energy efficiency also poses no stranded cost risk for consumers. Importantly, energy efficiency is cleaner than any other generation that a utility can procure.

I would like to call the Commission's attention to page 29 of DP&L's IRP filing, which notes a key assumption of the Company's IRP forecasting model: New Jersey will reduce its energy consumption by 20% by 2020. Wrongly, I believe, the Commission has ordered DP&L to issue an RFP that expects Delawareans, *during the same period*, to pay for an additional 400MW of new capacity. This discrepancy is due in large part because the statewide New Jersey Clean Energy Program offers competitive sustainable energy services that include energy efficiency, DSM and customer-sited renewable energy generation. At the moment, Delaware has no

⁷ RFP, p. 2.

⁸ HB6, Amendments to 1007, 26 (d)

comparable program. However, the Sustainable Energy Utility Task Force, which I created last May and now co-chair, is working to develop a framework for competitively offered sustainable energy services in Delaware.

Included in the proposed framework for a Delaware Sustainable Energy Utility are competitively offered services to meet targeted markets for customer-sited renewable energy generation, end-user energy efficiency, weatherization, clean vehicles, green buildings, and affordable energy. Accordingly, the Task Force has worked to define a preliminary framework that promotes accountability and competition by emphasizing the same critically important features of DSM programs that DP&L lists in its IRP: “large scale demand-side management programs require comprehensive planning, design, implementation, administration, and evaluation to be effective.”⁹

Preliminary calculations of Delaware’s energy efficiency potential, supplied by SEU Task Force research staff and included below, show that Delaware has the capability to achieve, cost-effectively, a 35% reduction in energy consumption in the residential and commercial sectors. The Governor’s Energy Task Force concluded the same in 2003:

If overall energy intensity measures are used as the basis for establishing a target for Delaware, and New York is used as the benchmark for comparison, energy consumption per capita would have to be reduced by approximately 35% and energy per dollar of GSP would have to be reduced by about 30%. Coincidentally, this corresponds with the level of reduction suggested by the Delaware Climate Change Action Plan.¹⁰

Reports prepared by the SEU Task Force staff have demonstrated that states can achieve energy savings at a cost between 3-5 cents per kilowatt-hour with well-planned, administered, and verified energy efficiency programs.¹¹

With the support of research conducted by the Center for Energy and Environmental Policy, University of Delaware under the supervision of Dr. Byrne, I present the following estimations of Delaware’s energy efficiency/DSM near- and long-term potential in order to help put the RFP, and notices of intent to bid, in their proper perspective.

My Task Force’s calculations show that Delaware’s energy efficiency potential can displace between 850 and 1,000 MW of wind generation, and 300-540MW of coal IGCC generation. These calculations also show that an ambitious, competitively offered energy efficiency program alone can reduce peak demand by 518-560 MW, thus making unnecessary any DP&L capacity investments beyond its obligation to meet the State Renewable Portfolio Standard.

⁹ IRP, p. 17.

¹⁰ “Bright Ideas for Delaware’s Energy Future: Delaware Energy Task Force Final Report to the Governor.” Appendix C: Conservation and Efficiency Working Group – Final Report, pages 44-45, 2003.

¹¹ See the *SEU Task Force Briefing Book*, Section F and Appendix A, prepared by the Center for Energy and Environmental Policy, University of Delaware and Ralph Nigro of the Applied Energy Group (technical consultant to the Task Force), available at www.seu-de.org

Table 1: Estimated Energy and Demand Savings from an 8-Year Residential Energy Efficiency Program

Potential SEU Residential Energy Efficiency Program									
	Annual End-User kWh savings from EE*	Avoided T&D Losses	EE Capacity Factor		MW Peak Reduction (Cumulative)		Annual Consumer Bill Savings	Estimated Levelized Program Cost	Estimated Annual Program Cost (benefits of annual EE measures last for 10 yrs)
	(kWh)	(EIA nat'l average T&D Losses)	Low	High	Low estimate (MW)	High estimate (MW)	(\$)	(\$/kWh)	(\$)
Year 1	89,000,000	7%	32%	38%	29	34	12,727,000	\$0.03	26,700,000
Year 2	178,000,000				57	68	25,454,000		
Year 3	267,000,000				86	102	38,181,000		
Year 4	356,000,000				114	136	50,908,000		
Year 5	445,000,000				143	170	63,635,000		
Year 6	534,000,000				172	204	76,362,000		
Year 7	623,000,000				200	238	89,089,000		
Year 8	712,000,000				229	272	101,816,000		

*Note: See estimated EE savings from residential rebate programs in Table 5.

Source: Center for Energy and Environmental Policy, University of Delaware, 2006.

Table 2: Estimated Energy and Demand Savings in Year 8 from Targeted Commercial Energy Efficiency

Potential SEU Commercial Energy Efficiency Program						
	Total Annual DP&L Commercial Consumption (2004 data)	Targeted EE Savings as % of Commercial Consumption	Annual End-User kWh Savings from EE (by Year 8)	Commercial Load Factor	Avoided T&D Losses	MW Peak Reduction
Targeted Program Achievement	(kWh)	(%)	(kWh)	(%)	(EIA nat'l avg.)	(MW)
Year 8	3,379,982,000	35%	1,182,993,700	50%	7%	289

Source: Center for Energy and Environmental Policy, University of Delaware, 2006.

Table 3: Energy Efficiency Load Reductions versus Avoided Generation Capacity – SEU Projection

Avoided Generation from Potential SEU Energy Efficiency Programs - EE vs. Avoided New Coal and Wind Generation								
Annual Energy Efficiency Energy Savings (Year 8 – Residential + Commercial EE) (kWh)	MW Peak Reduction from Energy Efficiency (Year 8- Residential + Commercial EE)		Wind Capacity Factor (%)	IGCC Capacity Factor		MW Avoided Wind Generation (MW)	MW Avoided IGCC Generation	
	Low Estimate (MW)	High Estimate (MW)		Low Estimate (%)	High Estimate (%)		Low Estimate (MW)	High Estimate (MW)
1,894,993,700	561	518	27%	50%	75%	857	309	463

Source: Center for Energy and Environmental Policy, University of Delaware, 2006.

Table 4: Avoided Capacity with Governor’s Energy Task Force Projected Savings

Governor's Energy Task Force Report											
Targeted Consumption Reduction	Total Annual DP&L Residential Consumption	Total Annual DP&L Commercial Consumption	Expected Feasible EE Savings	Avoided T&D Losses	EE Capacity Factor		MW Peak Reduction from EE		MW Avoided Wind Generation	MW Avoided IGCC Generation	
% of total usage	(kWh)	(kWh)	(kWh)	(EIA nat'l average)	Low	High	Low estimate	High estimate	(MW)	Low Estimate (MW)	High Estimate (MW)
35%	2,968,451,000	3,379,982,000	2,221,951,550	7%	32%	38%	714	848	1005	362	543

Source: Center for Energy and Environmental Policy, University of Delaware, 2006; based on the 2003 Delaware Governor’s Energy Task Force Report.

Table 5: Potential Targets Appliances for a Residential Energy Efficiency Program

Appliance Type	Total % with 1 or more appliances (2001 South Atlantic, U.S. EIA, RECS), see Note 2	% with 1 or more appliances > 10 years old (2001 South Atlantic, U.S. EIA, RECS)	Estimated Total No. of Appliances Based on No. of Delaware Households (assumes 1 per household)	Approximate No. of Appliances > 10 years old (i.e. likely to be replaced)	Average National Replacement/New Sales Rate (need to separate replacements from new sales)	Estimated Delaware Sales for Replacement/New Sales	% of 2004 Sales that are Energy Star rated	Targeted Energy Star Replacement rate (%)	Targeted Energy Star Replacement (no. of units)
Refrigerators	100%	29%	298,736	86,633	10%	30,551	30%	60%	18,331
Freezers	33%	17%	98,583	16,759	7%	7,254			
Clothes Washers	85%	20%	253,926	50,785	10%	26,644	26%	50%	13,322
Low Flow Showerhead									
CFLs									
Residential Light Fixtures									
Central AC w/o Heat Pump	51%	26%	152,355	39,612	12%	18,187	33%	66%	12,003
Room AC	14%		41,823	-	32%	13,367	0%		
Central AC w/ Heat Pump	8%	26%	23,899	6,214	17%	3,989	33%	66%	2,633
Water Heaters - Electric	69%	39%	206,128	80,390	11%	23,108			

Appliance Type	Targeted Incremental Replacement Rate for Units >10 years old (i.e. new purchases b/c of incentives) (%)	Targeted Incremental Replacement Rate for Units > 10 years old (no. of units)	Total Targeted Energy Star Sales per year	Average Annual Electricity Savings per unit (kWh) (difference between E-Star and >10yr-old appliance)	Total Annual Energy Savings (kWh/yr)	Cost of Rebates (\$/unit)	Total rebate cost (\$)
Refrigerators	5%	4,332	22,662	750	16,996,736	75	1,699,674
Freezers	4%	670	670	609	408,251	30	20,111
Clothes Washers	5%	2,539	15,861	815	12,927,076	75	1,189,608
Low Flow Showerhead			50,000	93	4,650,000	5	250,000
CFLs			100,000	77	7,700,000	2	200,000
Residential Light Fixtures			100,000	85	8,500,000	10	1,000,000
Central AC w/o Heat Pump	6%	2,377	14,380	1,794	25,797,895	200	2,876,020
Room AC	16%	13,367	13,367	385	5,146,310	35	467,846
Central AC w/ Heat Pump	9%	559	3,192	1,511	4,823,070	200	638,394
Water Heaters - Electric	6%	4,823	4,823	375	1,808,772	35	168,819

Total Annual Energy Savings = 89,000,000 kWh

Source: Center for Energy and Environmental Policy, University of Delaware, 2006.

4. Sustainable Energy Policy at a Crossroads

Given the lack of development of successful and substantial energy efficiency programs in our State and our still-abundant ‘low-hanging energy efficiency fruit,’ Delawareans have an opportunity to capture massive energy savings at the lower range of 3-5 cents per kilowatt-hour. New generation capacity, be it from power plants built in Delaware, or capacity wheeled in over the new transmission lines, simply cannot offer retail prices as low as energy efficiency. Indeed, as reported in the *SEU Task Force Briefing Book*, competitive supply services, at best, will offer Delawareans electricity at retail costs between 10-14 cents per kWh.¹² Thus, Delawareans can hope to save only 1-5 cents per kWh from supply options, while energy efficiency produces savings of 10-12 cents per kWh.¹³

While the work of the SEU Task Force on cost-effective customer-sited renewable energy generation is still underway, we expect significant opportunities to be identified. The forthcoming estimates will only reinforce the argument that no new physical generation, secured by long-term contracts, is necessary in Delaware.

If DP&L is locked into 10-year or longer contracts for new power plants that are unnecessary, the Commission will have created an ironic condition. When the State finally takes advantage of cost-saving and clean energy efficiency and customer-sited renewable energy generation options, ratepayers will be forced to pay the stranded cost of unnecessary and unused power plant decided by a regulatory process. Would this lead the Commission to assess a penalty against successful energy efficiency and customer-sited renewable energy generation programs in order to rationalize the decision to acquire new physical generation via long-term contracts?

Echoing the findings of the 2003 Governor’s Energy Task Force Report, the 2000 State Climate Change Action Plan, the 2006 Sustainable Energy Utility Task Force Briefing Book, and HB6’s intent for an IRP process to “investigate all potential opportunities for a more diverse supply at the lowest reasonable cost,”¹⁴ I urge the Commission to consider the vital importance of energy efficiency, DSM and customer-sited renewable energy generation as the proper tools to meet Delaware’s next 10 years of new electricity needs.

I respectfully request the Commission to suspend the adopted RFP procedure. Further, I ask that the Commission await PJM’s findings, due by the second quarter of 2007, on the status of proposed transmission upgrades in the Delmarva Peninsula before approving an RFP for issuance by DP&L. I also respectfully request that the Commission await the findings of the Sustainable Energy Utility Task Force and allow the Legislature the opportunity to consider spring 2007 legislation that will result from this Task Force.

Postscript

I wish to note for the record my long-time advocacy of the utilization of renewable energy. In my view, solar, wind, geothermal and other renewable sources *are* where our future lies. As

¹² See the *SEU Task Force Briefing Book*, Section F, at www.seu-de.org.

¹³ These estimates of savings from energy efficiency derive from independently validated studies of programs operated for 10 or more years in six leadership states – California, Connecticut, Massachusetts, New Jersey, New York, and Vermont – see *SEU Task Force Briefing Book*, Section F and Appendix A, at www.seu-de.org.

¹⁴ HB6, Amendments to Section 1007, 26, (c)(1) 2

reflections of my commitment to renewables, I authored the bill creating the Green Energy Fund to enable our State to invest in these promising options; I also authored the State's Renewable Portfolio Standard (RPS) to ensure their rapid diffusion into our electricity market. Renewables, including utility-scale projects that tap these sources, must be a vital part of our State energy policy agenda. Thus, I would not wish my comments to be construed by the Commission as an argument against their development. However, my first priority is the development of energy efficiency – as noted above, *you cannot generate a cheaper or cleaner unit of energy than a unit of saved energy*. Sharing this top priority is the opportunity to develop customer-sited renewable energy generation, which can directly shave peak loads and decongest transmission and distribution lines. Too often, in energy policy we have reached for a technology 'silver bullet' in the form of large, centralized facility planning, neglecting energy efficiency and customer-sited renewable technology. Our State is behind many who have not made this error. I hope we can move a policy agenda forward that enables Delaware to quickly attract significant and competitive energy efficiency and customer-sited renewable generation opportunities. As we act on this policy priority, I will also eagerly commit my time and effort to design policies that can help our State to take advantage of utility-scale renewable energy possibilities.